WHAT IS CLAIMED IS:

1. A method of fabricating a thin film transistor, comprising the steps of:

forming an amorphous silicon film on an insulating substrate;

heat treating said amorphous silicon film by laser annealing or RTA (rapid thermal annealing) employing a temperature not deforming said substrate, thereby forming a polycrystalline silicon film;

forming a gate electrode on said polycrystalline silicon film through a gate insulating film;

forming an impurity region in said polycrystalline silicon film; and

heat treating said impurity region by laser annealing or RTA employing a temperature not deforming said substrate, thereby activating said impurity region;

a heat treatment method in said step for forming said polycrystalline silicon film being different from that in said step for activating said impurity region.

2. The method of fabricating a thin film transistor in accordance with claim 1, wherein said amorphous silicon film contains microcrystals.

3. A method of fabricating a thin film transistor having a gate electrode comprising at least two-layer structure of a silicon film and a metal or metal silicide film, simultaneously performing reduction of resistance of said gate electrode and activation of said impurity region by RTA or laser annealing.

4. The method of fabricating a thin film transistor in accordance with claim 1, wherein light irradiation heat from a xenon arc lamp is employed as a heat source for said RTA.

5. The method of fabricating a thin film transistor in accordance with claim 1, wherein heating by said RTA is performed a plurality of times while the heating temperature is increased stepwise from the initial time to the final time.

6. A liquid crystal display employing thin film transistors being fabricated by the method in accordance with claim 1 as at least one element of each pixel driving element and each peripheral driving circuit element.

7. A semiconductor device comprising:

a heat absorption film being formed on a substrate;

a semiconductor film being formed on said heat

absorption film;

a gate electrode being formed on said semiconductor film through a gate insulating film; and

an impurity region being formed in said semiconductor film;

said heat absorption film being provided within a region substantially corresponding to said semiconductor film.

8. The semiconductor device in accordance with claim 7, wherein an insulating film is formed between said heat absorption film and said semiconductor film.

9. The semiconductor device in accordance with claim 7, wherein said heat absorption film is provided in a size and within a region substantially corresponding to a channel region in said semiconductor film.

10. The semiconductor device in accordance with claim 7, wherein said heat absorption film is made of a conductive material such as a metal or metal silicide, or a semiconductor material such as silicon.

11. The semiconductor device in accordance with claim 7, wherein said heat absorption film has a shading property.

12. The semiconductor device in accordance with claim 7, wherein said substrate is a transparent substrate.

13. A display device employing the semiconductor device in accordance with claim 7 as at least one of each pixel driving element and each peripheral driving circuit element.

14. A method of fabricating a semiconductor device by providing a semiconductor film for serving as an active layer of a transistor on a substrate through a heat absorption film and activating an impurity region being provided in said semiconductor film by a heat treatment.

15. A method of fabricating a semiconductor device, comprising the steps of:

forming a heat absorption film on a substrate;

forming a semiconductor film on said heat absorption film;

forming a gate electrode on said semiconductor film through a gate insulating film;

forming an impurity region in said semiconductor film; and

activating said impurity region by a heat treatment;

said heat absorption film being provided within a

region substantially corresponding to said semiconductor film.

16. a method of fabricating a semiconductor device, comprising the steps of:

forming a heat absorption film on a substrate;

patterning said heat absorption film into a prescribed shape;

covering said heat absorption film with an insulating film;

forming a semiconductor film for serving as an active layer of a transistor on said insulating film;

forming a gate electrode on said semiconductor film through a gate insulating film;

forming an impurity region in said semiconductor film; and

activating said impurity region by a heat treatment;

said heat absorption film being provided within a region substantially corresponding to said semiconductor film.

17. The method of fabricating a semiconductor device in accordance with claim 15, wherein said semiconductor film is prepared by polycrystallizing an amorphous silicon film by a heat treatment.

18. The method of fabricating a semiconductor device in accordance with claim 17, wherein said heat treatment is performed by laser annealing.

19. The method of fabricating a semiconductor device in accordance with claim 15, wherein said heat absorption film is made of a conductive material such as a metal or metal silicide, or a semiconductor material such as silicon.

20. The method of fabricating a semiconductor device in accordance with claim 15, wherein said heat absorption film has a shading property.

21. The method of fabricating a semiconductor device in accordance with claim 15, wherein RTA is employed as said heat treatment.

22. The method of fabricating a semiconductor device in accordance with claim 21, wherein a xenon arc lamp is employed as a heat source for said RTA.

23. A method of fabricating a display device by employing a semiconductor device being fabricated by the method in accordance with claim 15 as at least one of each pixel driving element and each peripheral driving circuit

element.

24. A semiconductor device being formed by integrating a plurality of semiconductor elements on a substrate, wherein

each said semiconductor element has a heat absorption film provided between said substrate and said semiconductor elements, and an area or film thickness of said heat absorption film is relatively reduced in a portion where a relatively large number of said semiconductor elements are provided, while an area or film thickness of said heat absorption film is relatively increased in a portion where a relatively small number of said semiconductor elements are provided, in accordance with the distributed state of said semiconductor elements on said substrate.

25. A semiconductor device being formed by integrating a plurality of semiconductor switching elements on a substrate, each said semiconductor switching element comprising:

a heat absorption film being formed on said substrate;

a semiconductor film being formed on said heat absorption film;

a gate electrode being formed on said semiconductor film through a gate insulating film; and

an impurity region being formed in said semiconductor film;

wherein an area or film thickness of said heat absorption film is relatively reduced in a portion where a relatively large number of said semiconductor elements are provided, while an area or film thickness of said heat absorption film is relatively increased in a portion where a relatively small number of said semiconductor elements are provided, in accordance with the distributed state of said semiconductor elements on said substrate.

26. The semiconductor device in accordance with claim 24, wherein said area or film thickness of said heat absorption film is so adjusted that heat absorption of said absorption film functions substantially uniformly on said whole substrate.

27. The semiconductor device in accordance with claim 24, wherein said heat absorption film is made of a conductive material such as a metal or metal silicide, or a semiconductor material such as silicon.

28. A semiconductor device being formed by integrating a plurality of semiconductor elements on a substrate, said plurality of semiconductor elements comprising a plurality

of first semiconductor elements each having a heat absorption film and a plurality of second semiconductor elements each not having a heat absorption film;

wherein said second semiconductor elements are relatively concentrated in a portion where a relatively large number of said semiconductor elements are provided, while said first semiconductor elements are relatively concentrated in a portion where a relatively small number of said semiconductor elements are provided, in accordance with the distributed state of said semiconductor elements on said substrate.

29. A driver-integrated display device having a pixel part and a peripheral driving circuit part being formed on the same substrate, said driver-integrated display device comprising:

a pixel driving element being provided in said pixel part; and

a peripheral driving circuit element being provided in said peripheral driving circuit part; wherein

said pixel driving element and said peripheral driving circuit element are formed by semiconductor switching elements, and

each said semiconductor switching element comprises:

a heat absorption film being formed on said substrate,

a semiconductor film being formed on said heat absorption film,

a gate electrode being formed on said semiconductor film through a gate insulating film, and

an impurity region being formed in said semiconductor film,

a ratio of area or film thickness of said heat absorption film relative to said semiconductor film in said pixel part being adjusted to be larger than that of said heat absorption film in said peripheral driving circuit part.

30. The display device in accordance with claim 29, wherein said area of said heat absorption film in said pixel part is set to 0.01 to 60 % of the whole area of said pixel part.

31. The display device in accordance with claim 29, wherein said area of said heat absorption film in said peripheral driving circuit part is set to 0.01 to 60 % of the whole area of said peripheral driving circuit part.

32. The display device in accordance with claim 29, wherein said area of said heat absorption film in said substrate is set to 0.01 to 60 % of the whole area of said

substrate.

33. The display device in accordance with claim 29, wherein said substrate is one of a pair of substrates being opposed to each other through a liquid crystal layer.

34. The display device in accordance with claim 29, wherein each said heat absorption film is provided in a size and within an area substantially corresponding to a channel region of each said semiconductor film.

35. The display device in accordance with claim 29, wherein said heat absorption effect of each said heat absorption film is adjusted by changing the area or the thickness of said heat absorption film.

36. The display device in accordance with claim 29, wherein an insulating film is formed on each said heat absorption film.

37. The display device in accordance with claim 29, wherein each said heat absorption film is made of a conductive material such as a metal or metal silicide, or a semiconductor material such as silicon.

38. The display device in accordance with claim 29, wherein each said heat absorption film has a shading property.

39. The display device in accordance with claim 29, wherein said substrate is a transparent substrate.

40. The display device in accordance with claim 29, wherein RTA employing a xenon arc lamp as a heat source is employed as said heat treatment.

41. A display device being formed by integrating a plurality of semiconductor elements on a substrate, said plurality of semiconductor elements comprising a plurality of first semiconductor elements each having a heat absorption film and a plurality of second semiconductor elements each not having a heat absorption film;

wherein said second semiconductor elements are relatively concentrated in a portion where a relatively large number of said semiconductor elements are provided, while said first semiconductor elements are relatively concentrated in a portion where a relatively small number of said semiconductor elements are provided, in accordance with the distributed state of said semiconductor elements on said substrate.

42. A method of fabricating a semiconductor device, comprising the steps of:

forming a semiconductor film on a substrate;

forming a gate electrode on said semiconductor device through a gate insulating film;

forming an impurity region in said semiconductor film; and

activating said impurity region by a heat treatment through RTA,

heating by said RTA being performed a plurality of times, the heating temperature being increased stepwise from the initial time to the final time.

43. The method of fabricating a semiconductor device in accordance with claim 42, wherein the highest heating temperature in said stepwise increasing in temperature through RTA is a temperature not deforming said substrate.